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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,744	11/20/2003	Felix M. Sciulli	340058.534D1	8795

500 7590 02/15/2005

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EXAMINER
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PRONE, JASON D

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/717,744

**Applicant(s)**

SCIULLI ET AL.

**Examiner**

Jason Prone

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Stevens (5,599,328).

Stevens discloses the same invention including a mixing tube (24) comprising a body (18) having a bore extending there through along a longitudinal axis (64), a collar rigidly fixed to an outer surface of the mixing tube in an upper region of the mixing tube (55), that the collar being sized and capable of sliding upward through a bore of a cutting head and locate the mixing tube in a desired position (Fig. 3), a distance from a top surface of the mixing tube body to a bottom surface of the collar is capable of being 0.02-2.0 inches (Fig. 3), that the outer surface of the collar is substantially cylindrical (55), that the outer surface of the collar is substantially frusto-conical (55), that the collar (55) that is surrounded by a nut (122), and that an outer surface of the nut is being threaded to be capable of engaging a threaded inner surface of a cutting head (Fig. 2).

***Claim Rejections - 35 USC § 103***

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chalmers (5,018,670) in view of Stevens. Chalmers discloses the invention including a mixing tube (87) comprising a body (Fig. 2) having a bore extending therethrough along a longitudinal axis (88), a collar on the outer surface of the mixing tube in an upper region of the mixing tube (93), that the collar being sized to slide upward through a bore of a cutting head and locate the mixing tube in a desired position (Fig. 9), that the outer surface of the collar is substantially cylindrical (94), that the outer surface of the collar is substantially frusto-conical (93), and that the collar is surrounded by a nut (90) and an outer surface of the nut being threaded to engage an threaded inner surface of a cutting head (96) but fails to disclose that the collar is rigidly fixed to an outer surface of the mixing tube. Stevens teaches a collar that is rigidly fixed to an outer surface of the mixing tube (55). Therefore it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Chalmers with a collar rigidly attached to the mixing tube, as taught by Stevens, because the one-piece collar/tube combination would better stabilize itself than two individual parts that could become separated.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chalmers in view of Stevens as applied to claim 1 above, and further in view of Yie

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(4,55,872). Chalmers and Stevens disclose the invention but fail to disclose that the distance from a top surface of the mixing tube to a bottom surface of the collar is 0.02-2.0 inches and that the wall thickness of the collar is 0.01-0.2 inches. Yie discloses specific dimensions for a fluid jet apparatus (Columns 16-17, example II). The support cone (60) with a passage (61) in Yie is similar to holder (62) and passage (67) in Chalmers and would, therefore, be on a similar order of size. Moreover, Yie teaches a support cone/holder that has a diameter of 0.49 inches with a passage bore diameter of 0.15 inches. In view of the disclosed dimensions in Yie and that the structure in Chalmers and Yie are on the same order, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have made the distance between the top surface of the mixing tube and a bottom surface of the collar in Chalmers 0.02-2.0 inches and the wall thickness of the collar 0.01-0.2 inches. Additionally, to any degree that it can be argued that it is speculative that Chalmers is on the same order of size as the fluid jet apparatus in Yie, in view of their similarities in structure and function, such similarities in size would have been obvious to reproduce to meet established standards.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. In regards to the dimensions of claim 2. In claim 2, no specifics regarding which surface is the top surface and which surface of the collar is considered the bottom surface are claimed. In the Stevens reference, there are numerous surfaces that can be considered a top surface of the tube body and any

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of the surfaces, which could be considered a bottom surface of the collar, is capable of being 0.02-2.0 inches away from a top surface.

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is 571-272-4513. The examiner can normally be reached on 7:30-5:00, Mon - (every other) Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JP  
February 11, 2005



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